

Claims:

1. A portable communication apparatus comprising:
an image-capturing section for capturing an image
depending on an operation of a shutter key; and
a character recognition section for recognizing
5, characters from an captured image.
2. The portable communication apparatus according to
claim 1, further comprising:
a display for displaying at least the captured
image; and
10 a character-size adjustment indicator provided on
the display, wherein the character-size adjustment indicator
comprises a reference frame having a size which provides a
sufficiently high success rate in character recognition when
at least one character included in the captured image fits
15 into the reference frame.
3. The portable communication apparatus according to
claim 2, wherein the character-size adjustment indicator
appears on the display when portable communication apparatus
is set to a character recognition mode.
- 20 4. The portable communication apparatus according to

claim 2, wherein the character-size adjustment indicator is previously fixed on the display when portable communication apparatus is set to a character recognition mode.

5 5. The portable communication apparatus according to claim 2, wherein the reference frame is shaped like a rectangle oriented horizontally with respect to the display.

6. The portable communication apparatus according to claim 1, further comprising:

10 a timer for delaying an image-capturing operation of the image-capturing section by a predetermined time period after the operation of the shutter key has been completed.

7. The portable communication apparatus according to claim 6, wherein the predetermined time period is set through an input device of the portable communication apparatus.

15 8. The portable communication apparatus according to claim 2, further comprising:

 a timer for delaying an image-capturing operation of the image-capturing section by a predetermined time period after the operation of the shutter key has been completed.

20 9. The portable communication apparatus according to claim 1, further comprising:

a program memory storing a plurality of programs including a mailer program and a browser program; and
a processor for executing at least one program thereon,

5 wherein

when a string of the recognized characters represents an e-mail address, the processor starts the mailer program,

10 when a string of the recognized characters represents a URL (uniform resource locator), the processor starts the browser program, and

when a string of the recognized characters represents a phone number, the processor starts making a call at the phone number.

10. The portable communication apparatus according to
15 claim 1, further comprising:

a memory storing a plurality of types of recognition criterion each corresponding to different types of a string of characters to be recognized,

20 wherein the character recognition section uses one of the types of recognition criterion to recognize characters from the captured image.

11. The portable communication apparatus according to claim 9, further comprising:

a memory storing a plurality of types of recognition

criterion each corresponding to different types of a string of characters to be recognized,

wherein the character recognition section uses one of the types of recognition criterion to recognize characters
5 from the captured image.

12. A data input method in a portable communication apparatus having an image-capturing function of capturing an image, the method comprising:

capturing an image depending on an operation of
10 a shutter key; and

recognizing characters from a captured image to enter the characters as input data.

13. A method for recognizing characters in a portable communication apparatus having an image-capturing device and
15 a display, the method comprising:

a) setting a character-size adjustment indicator on the display, wherein the character-size adjustment indicator comprises a reference frame having a size which provides a sufficiently high success rate in character
20 recognition;

b) capturing an image depending on an operation of a shutter key when at least one character displayed on the display fits into the reference frame;

c) recognizing the at least one character within

the reference frame from a captured image; and

d) displaying recognized characters in a predetermined display area on the display.

14. The method according to claim 13, wherein the step

5 c) comprises:

c.1) image-processing the captured image to produce a processed image;

c.2) clipping out a portion of the processed image within the reference frame; and

10 c.3) recognizing the at least one character from the portion of the processed image.

15. The method according to claim 13, wherein the step

c) comprises:

15 c.1) image-processing a portion of the captured image within the reference frame to produce a processed image; and

c.2) recognizing the at least one character from the processed image.

16. The method according to claim 13, further

20 comprising:

e) repeating the steps b)-d) by sequentially selecting portions of a string of characters displayed on the display, each portion including at least one character which

fits into the reference frame, wherein the recognized characters are displayed on the display by combining the portions in series, each of which includes at least one recognized character.

5 17. The method according to claim 13, wherein the step b) comprises:

, delaying an image-capturing operation by a predetermined time period after the operation of the shutter key has been completed.

10 18. The method according to claim 13, wherein the step c) comprises:

 c.1) storing a plurality of types of recognition criterion each corresponding to different types of a string of characters to be recognized;

15 c.2) determining a type of a string of characters to be recognized; and

 c.3) recognizing the at least one character within the reference frame based on a recognition criterion corresponding to the type of the string of characters to be
20 recognized.

 19. The method according to claim 18, further comprising:

 e) when the string of the characters recognized

is of an e-mail address type, the processor starts a mailer program,

f) when the string of the characters recognized is of a URL (uniform resource locator) type, the processor
5 starts a browser program, and

g) when the string of the characters recognized is of a phone number type, the processor starts making a call at a phone number represented by the string of the characters recognized.

10 20. A program instructing a computer to recognize characters in a portable communication apparatus having an image-capturing device and a display, the program comprising the steps of:

a) setting a character-size adjustment indicator
15 on the display, wherein the character-size adjustment indicator comprises a reference frame having a size which provides a sufficiently high success rate in character recognition;

b) capturing an image depending on an operation
20 of a shutter key when at least one character displayed on the display fits into the reference frame;

c) recognizing the at least one character within the reference frame from a captured image; and

d) displaying recognized characters in a
25 predetermined display area on the display.